L 53653-65 EWT(1)/FCC/EEC(t) Po-4/Pi-4 GW

ACCESSION NR: AT5011149 UR/3148/64/000/006/0027/0037

20
B+1

AUTHOR: Raspopov, O. M.; Shneyer, V. S.

12

TITLE: Observations of short periodic oscillations of the geomagnetic field on the drifting station SP-6

12

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. 3 razdel programmy MGG: Geomagnetizm i zemnyye toki. Sbornik statey, no. 6, 1964. Geomagnitryye issledovaniya, 27-37

TOPIC TAGS: geomagnetic oscillation, oscillogram, magnetic storm, force line, non-homogeneity, ionospheric current

ABSTRACT: Observations of geomagnetic oscillations of short duration were started on the drifting station Severnyy Polyus-6 (North Pole-6) in 1959. The geographic coordinates of the station at the start of observations were 82°N lat and 7°E long. Oscillations were recorded by a variation of the Bryunelli-type apparatus. The period of magnetic oscillations was from 10 to 300 sec. The best agreement of oscillograms was obtained on Severnyy Polyus-6 and at Mirnyy in Antarctica. Records of a magnetic storm with sudden commencement showed total agreement of the process on Severnyy Polyus-6 and at Mirnyy. Short periodic oscillations recorded at other stations located at lower latitudes differed from those obtained on Severnyy Polyus-6

Card 1/2

L 53653-65

ACCESSION NR: AT5011149

and Mirnyy, both in time and amplitude. The two polar stations are located on opposite ends of force lines along which the oscillations propagate. Oscillations of sinusoidal form recorded at these stations were not observed at other stations. Several differences in records of Mirnyy and Severnyy Polyus-6 are explained by non-homogeneities of the upper ionosphere and fluctuations of ionospheric currents. The general character of short periodic oscillations on Severnyy Polyus and at Mirnyy may be considered as proof of the hydrodynamic origin of short periodic oscillations. Orig. art. has: 1 table and 7 figures. [EG]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4013

Card 2/2

RASPOPOV, O.M.

Analysis and comparison of computation graphs used in calculating the second vertical potential derivative. Izv. AN SSSR. Fiz. zem. no.1:116-120 '65. (MIRA 18:5)

1. Leningradskiy ordena Lenina gosudarstvennyy universitet imeni Zhdanova.

RASPOPOV, O.M.

Errors involved in calculating the second vertical derivative of the potential from the field of the first derivative. Uch. zap. LGU no.324:162-165 '64.

Dot chart for calculating the second vertical derivative of the V_{zz} potential of two-dimensional fields with low sensitivity to errors of the initial field V_z. Ibid.:167-173

(MIRA 18:4)

L 50994-65 FSS-2/EWT(1)/EEC(m)/EWG(v)/FCC/EEC-4/EEC(t)/EWA(h) Po-4/Pe-5/Pq-4/
Pae-2/Peb/Pi-4 GW

ACCESSION NR: AT5011148 UR/3148/64/000/006/0022/0026

AUTHOR: Raspopov, O. M.

55
B+1

TITLE: Investigations of current systems in the ionosphere

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. 3 razdel programmy MGG: Geomagnetizm i zemnyye toki. Sbornik statey, no. 6, 1964. Geomagnitnyye issledovaniya, 22-26

TOPIC TAGS: geomagnetic field, ionospheric current, current density, vertical magnetic gradient, magnetic horizontal component, rocket trajectory

ABSTRACT: Magnetometric devices mounted on a rocket were used to measure the scalar value of the total vector of the geomagnetic field. Passing through the system of ionospheric currents, the devices measured the change of the horizontal component of the magnetic field, which depended upon the current density in this layer. The position of the system of ionospheric currents and their intensity were determined by the sudden change of the gradient of the magnetic field along the rocket trajectory. There are two ways of theoretically determining the variations of the horizontal component of the geomagnetic field. The less exact way consists in determining the total vector from the sum of the squares of horizontal and vertical components. The other way is to use the horizontal and the vertical com-

Card 1/2

L 50994-65

ACCESSION NR: AT5011148 D

ponents with their vertical gradients. Different formulas are derived, and the variation of the horizontal component with the possible error is determined. Numerical values of variations are used for determining the density of ionospheric currents and their heights. The azimuth of the ionospheric current system cannot be determined from rocket records. Some numerical examples showed that accurate parameters of an ionospheric current system can be obtained theoretically, using formulas based on horizontal and vertical components and their vertical gradients. Orig. art. has: 1 table, 3 figures, and 8 formulas. [EG]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 000 OTHER: 003 ATD PRESS: 4014

Card 2/2

RASPOPOV, P.M.

Dynamics of the foci of mass multiplication of nun moths and other pests in the forests of the northwestern part of Chelyabinsk Province. Trudy Il'm. gos. zap. no.8:169-182 '61. (MIRA 15:11)
(Chelyabinsk Province--Nun moth)
(Chelyabinsk Province--Forest insects)

RASPOPOV, P.M.

Controlling harmful insects and diseases of trees in the forests of Chelyabinsk Province. Trudy Inst. biol. UFAN SSSR no. 25:139-147 '61. (MIRA 15:6)

(Chelyabinsk Province--Trees--Diseases and pests)

RASPOPOV, P.M.

Diseases of pine Fungus in nurseries and forest plantations in the northwestern part of Chelyabinsk Province and measures for their control. Trudy Inst. biol. UFAN SSSR no. 25:159-165 '61.
(MIRA 15:6)

(Chelyabinsk Province—Pine—Diseases and pests)
(Fungi, Phytopathogenic)

RASPOPOV, P.P.

Problem of the "Behavior pattern" and the nervous system
type. Vop.psikhol. 5 no.6:62-72 N-D '59.
(MIRA 13:4)

1. Kafedra pedagogiki i psikhologii Kirovskogo gosudarstvennogo pedagogicheskogo instituta im. V.I.Lenina.
(CONDUCT OF LIFE) (NERVOUS SYSTEM)

RASPOPOV, P.P.

Phasic states of cortical excitation as related to individual psychological peculiarities of pupils [with summary in English]. Vop. psikhol. 4 no.2:23-37 Mr-Ap '58. (MIRA 11:5)

1. Kafedra pedagogiki i psikhologii Kirovskogo gosudarstvennogo pedagogicheskogo instituta im. V.I. Lenina.
(Cerebral cortex)

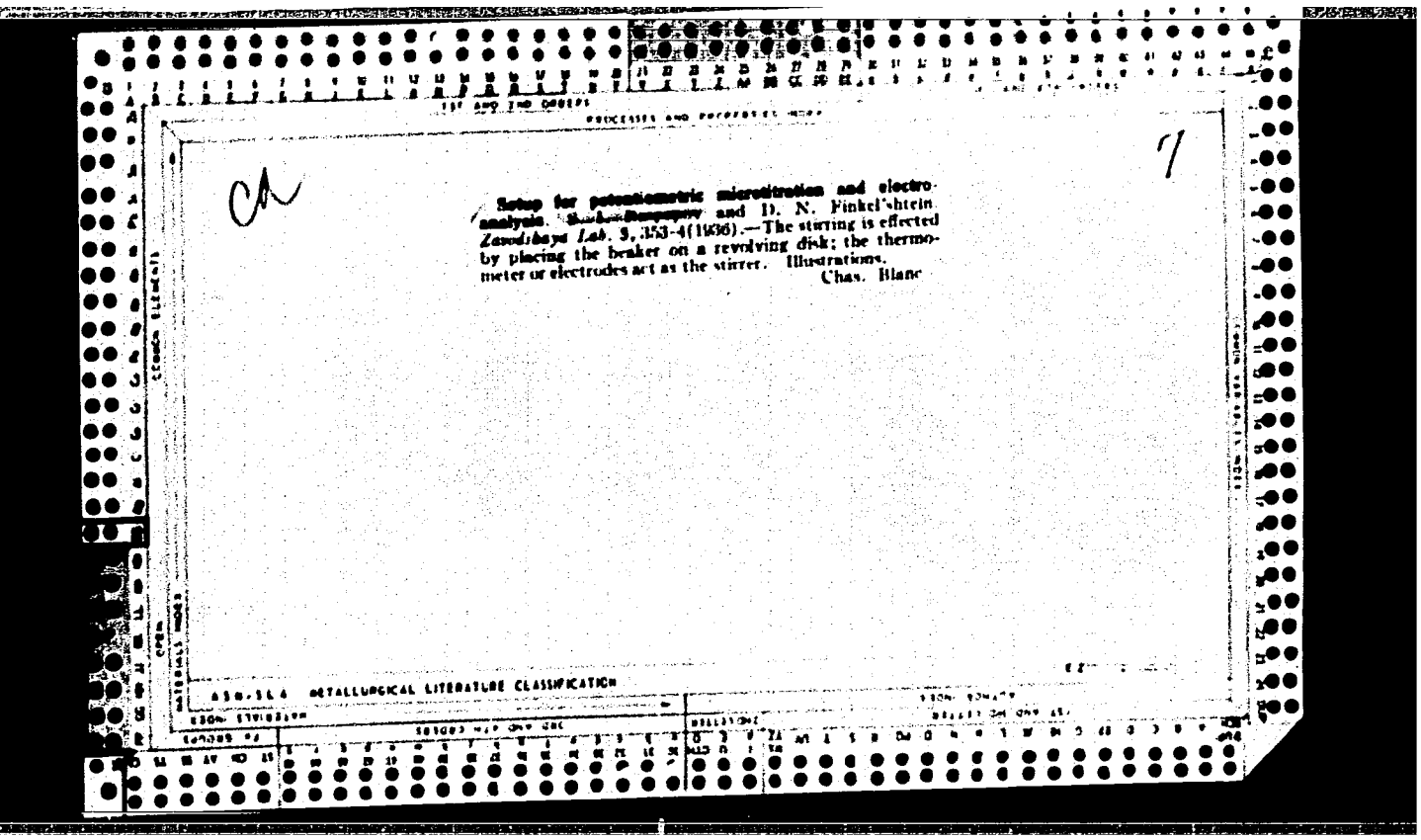
BC

a-1

PROCESSES AND PROPERTIES INDEX

Apparatus for use in electrometric micro-titration and electro-analysis. S. I. Rasputov and D. N. Finkelshtein (Zavod. Lab., 1936, 5, 353—354).
R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Setup for potentiometric microtitration and electro-analysis. [illegible] and D. N. Finkel'shtein. *Zavodskaya Lab.* 5, 353-4(1936).—The stirring is effected by placing the beaker on a revolving disk; the thermometer or electrodes act as the stirrer. Illustrations.
Chas. Blanc

A56-5L4 METALLURGICAL LITERATURE CLASSIFICATION

RASPOPOV, V.

41-1-

Blast-furnace practice with the use of Krivoi Rog fluxed sinter. V. Raspopov, Ya. P. Kulikov, Ya. S. Gorlanev, and G. D. Smirnov (Met. Inst., Zhdanov). Stal 17, 99–103(1957).—A detn. of the effect of basicity increase of sinter from 0.85 to 1.2 and charge in the amt. of 55–65% indicated that with a basicity of 1.0–1.2 the coke rate can be reduced by 16% while production can be increased by 8%. The sintering temp., FeO content in the sinter, size of limestone added, blast temp., blast humidity, and MgO content of the sinter were varied. Lowering free CaO content from 2.5 to 1.35% by grinding limestone to 70% under 5 mm. led to a high-sintering temp., a high-FeO content, and lower reducibility, thus leaving the optimum grinding size for limestone undecided. Fluxed sinter is more dense and offers a higher resistance to the blast; it is more friable, resulting in 24% of fines in place of the usual 18% so that sizing is beneficial. A partial replacement of CaO with MgO does not strengthen the sinter or increase its production. Its use is not recommended when the sinter is used in combination with ores having an easily fusible gang, but is advantageous when the gang is refractory. The use of MgO always calls for a hot-working furnace. I. D. Gat

RG
MT

KHARITONOV, G.N.; RASPOPOV, V.A.

Remote control of lumber drying systems. Der. prom. 13 no.4: 4-5 Ap '64. (MIRA 17:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

KHARITONOV, G.N.; RASPOPOV, V.A.

Automatic control of chamber-drying of wood. Der. prom. 12 no.10:18-20 O '63. (MIRA 16:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

SUKACH, A.D., inzh.; RASPOPOV, V.I., inzh.; LITVINOV, G.A., inzh.

UKR1 cutter-loader unit. Ugol' Ukr. 4 no. 11:32-34 N '60.
(MIRA 13:12)

1. Dongiprouglemash.
(Donets Basin--Coal mining machinery)

RASPOPOV, V.I., konstruktor; SUKACH, A.D., konstruktor; D'YACHENKO, K.I., konstruktor; LITVINOV, G.A., konstruktor; GOL'DSHTEYN, M.Ya., konstruktor; MOGILEVSKIY, L.G., konstruktor; ZAYTSEV, G.I., konstruktor; BURLYGA, F.I., red.; SAMOLETOVA, A.V., tekhn. red.

[New equipment unit on pitching seams] Novyi kompleks na krutopadaiushchikh plastakh. Stalino, Knizhnoe izd-vo Stalino-Donbas, 1961. 56 p. (MIRA 16:6)
(Coal mining machinery)

RASPOPOV, Vladimir Ivanovich; ABRAMOV, V.I., otv. red.; BOLDYREVA, Z.A., tekhn. red.

[Handbook on the exploitation, maintenance and repair of the lUKRl; rukovodstvo po ekspluatatsii, ukhodu i obsluzhivaniiu. Moskva, Gosgortekhizdat, 1963. 155 p. (MIRA 16:5)
(Coal mining machinery)

DUROV, S.A.; PEROVA, N.I.; RASPOPOV, Ye.I.

Formation of soda as a result of sulfate ion sorption. Dokl. AN SSSR 143 no.4:849-851 Ap '62. (MIRA 15:3)

1. Novocherkasskiy politekhnicheskiy institut. Predstavleno akademikom S.I.Vol'fkovichem.
(Sodium carbonates) (Sulfates)

DUROV, S.A. [deceased]; RASPOPOV, Ye.I.

Interaction of the water of the Krasnoarmeyskiy Spring with aluminum oxide. Gidrokhim. mat. 38:117-120 '64. (MIRA 18:4)

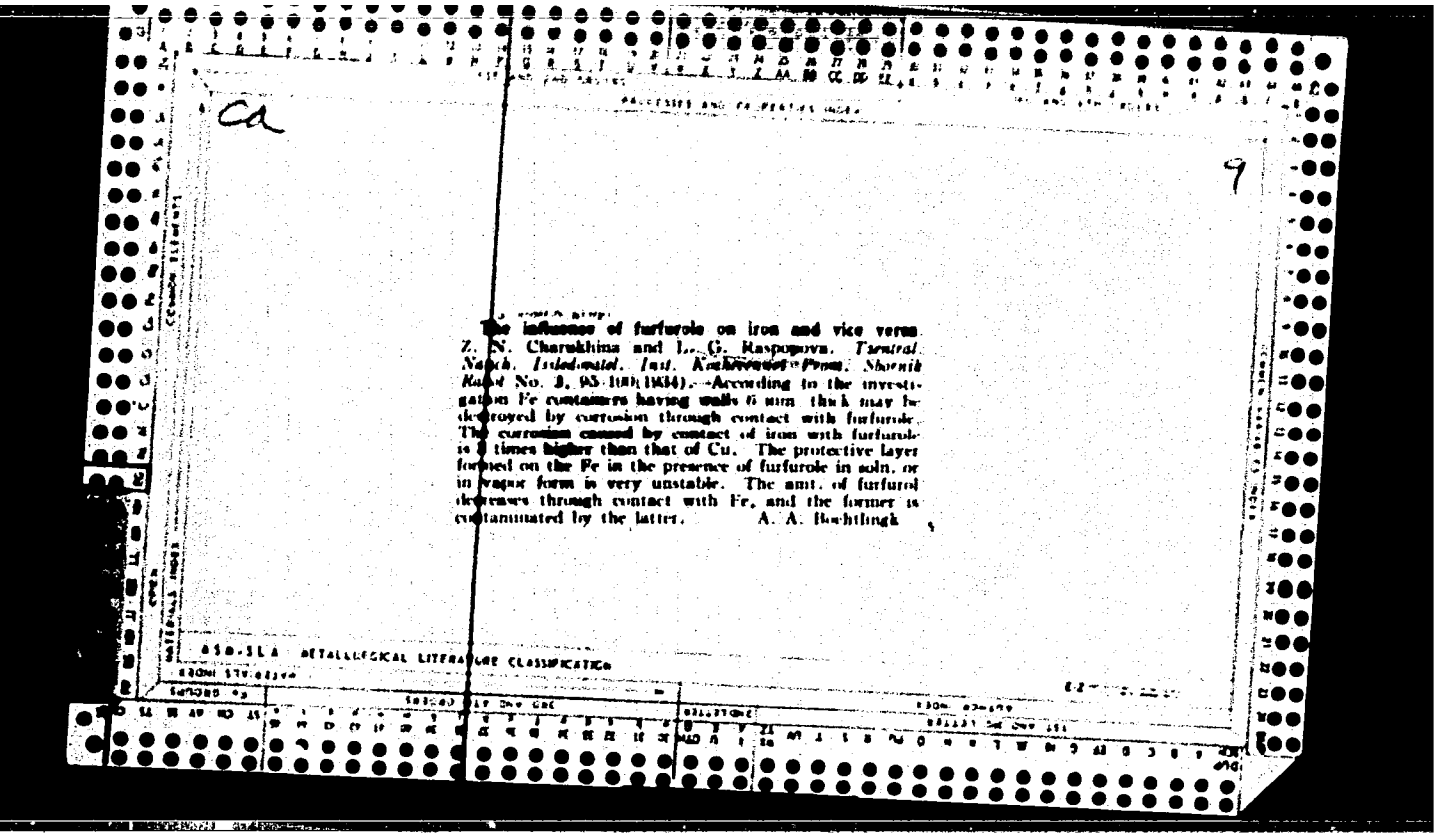
1. Novocherkasskiy politekhnicheskiy institut i Nauchno-issledovatel'skiy institut kurortologii i fizioterapii, Pyatigorsk.

RASPOPOVA, Anna Ivanovna; DROKHANOVA, Ye.N., red.; YELAGIN, A.S., tekhn. red.

[One-hundred and forty calves a year] Dvesti sorok teliat za god. Moskva, Izd-vo "Sovetskaia Rossiia," 1961. 15 p. (MIRA 14:11)

1. Telyatnitsa kolkhoza "Rossiya" Annenskogo rayona Voronezhskoy oblasti (for Raspopova).

(Calves)



Ca

9

The influence of furfurole on iron and vice versa. Z. N. Charukhina and L. G. Raspopova. *Tsentral. Nauch. Issledovatel. Inst. Kommunal. Prom., Sbornik Rabot* No. 3, 95-108 (1934).—According to the investigation Fe containers having walls 6 mm. thick may be destroyed by corrosion through contact with furfurole. The corrosion caused by contact of iron with furfurole is 8 times higher than that of Cu. The protective layer formed on the Fe in the presence of furfurole in soln. or in vapor form is very unstable. The amt. of furfurol decreases through contact with Fe, and the former is contaminated by the latter. A. A. Buchtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

8-I-5

Influence of furfuraldehyde on iron. Z. N. [illegible] and L. G. [illegible] (Trudy Nauch. Issl. Inst. Koz. Prom. [illegible] [illegible], No. 3, 98—100).—Fe containers 6 mm. thick may be destroyed by contact with furfuraldehyde. The corrosion is 3 times that for Cu.

Ch. Abs. (e)

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

3RD AND 4TH ORDERS

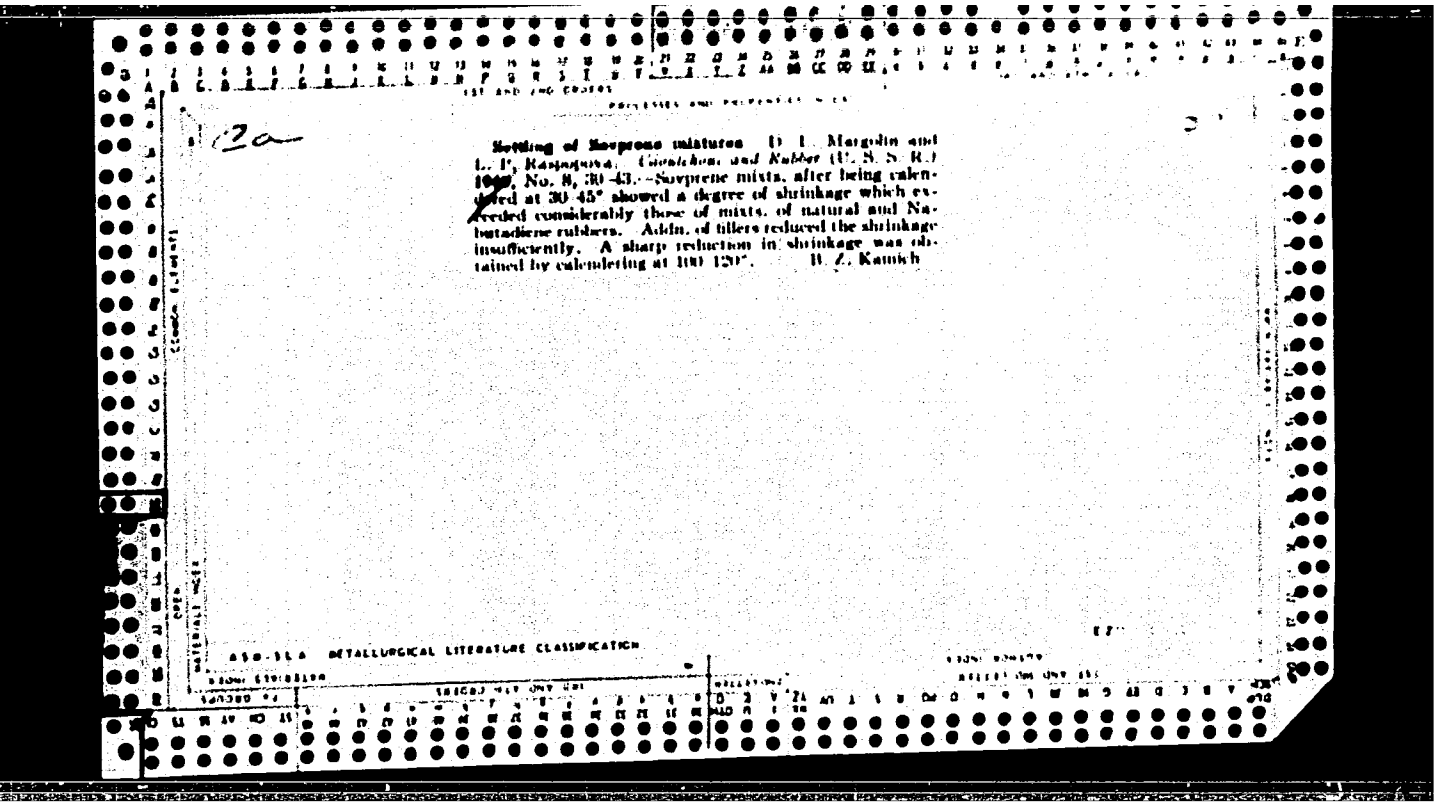
AUTHOR INDEX

1ST AND 2ND LETTERS

PROCESSES AND PROPERTIES INDEX

Use of Sovprene of different plasticities. D. L. Margolin and L. P. Raspopova. *Caoutchouc and Rubber* (U. S. S. R.) **1940**, No. 2, 21-4.—Sovprenes of plasticities below and above 0.2-0.65 (Karrer) have not found use in the rubber industry because of the difficulties in milling, vulcanization and manuf. Expts. have shown that these difficulties can be overcome by blending Sovprene of high and low plasticity. The plasticity of the mixt. is detd. from $P = (P_A A + P_B B)/(A + B)$, where P is the plasticity of the mixt., A and B are the contents of the components in the mixt., and P_A and P_B are their plasticities. Low-plasticity Sovprene was milled for 7-8 min. and high-plasticity Sovprene for 2-4 min., after which the latter was added to the former and the mixt. was milled for 8-10 min. The rolls were kept at 40°. If one of the components is "liquid," the low-plasticity Sovprene should be milled first and the "liquid" added in small amts. The rolls should be cooled to 25-30°. The plasticities of the mixts. were in close agreement with calcns. The phys.-mech. characteristics of the rubbers prepd. from such mixts. were higher than those of the sep. components. R. Z. Kamch

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION



13a

Setting of Neoprene mixtures. D. L. Margolin and L. P. Kasparova. *Caoutchouc and Rubber* (U. S. S. R.) 1939, No. 8, 39–43.—Neoprene mixts. after being calendered at 30–45° showed a degree of shrinkage which exceeded considerably those of mixts. of natural and Na-butadiene rubbers. Addn. of fillers reduced the shrinkage insufficiently. A sharp reduction in shrinkage was obtained by calendering at 100–120°. B. Z. Kanich

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

ZARETSKIY, Ya.S.; RASPOPOVA, L.V.; AVECHKO-ANTONOVICH, L.A.;
FRIDLAND, V.M.; KIRPICHNIKOV, P.A.; TAGANTSEV, A.V.

New thiokol sealers for the construction industry. Stroi. mat. 10 no.3:8-9 Mr '64. (MIRA 17:6)

AVERKO-ANTONOVICH, L.A.; KIRPICHNIKOV, P.A.; ZARETSKIY, Ya.S.; FRIDLAND, V.M.; PROKHOROV, V.S.; RASPOPOVA, L.V.; Prinimala uchastiye: ZUBKOVA, T.P.

Production of colored thiokol sealing materials. Kauch. i rez. 24 no.9:20-23 '65. (MIRA 18:10)

1. Kazanskiy khimiko-tekhnologicheskiy institut imeni S.M.Kirova.

S/852/62/000/000/003/020
B107/B107

AUTHORS: Raspopova, L. V., Shneyderova, V. V.

TITLE: New Thiokol lattices and coatings resistant to gasoline and oil on their basis

SOURCE: Primeneniye polimerov v antikorrozionnoy tekhnike. Ed. by I. Ya. Klinov and P. G. Udyma. Moscow, Mashgiz, 1962. Vses. sovet nauchno-tekhn. obshchestv. 44 - 47

TEXT: A new aqueous dispersion T-50 (T-50) of Thiokol was developed by the VNIIST to make reinforced concrete containers impervious to petroleum products. T-50 was produced by polycondensation of a mixture of dichloroethane and 1,2-dichloropropane with sodium tetrasulfide, desulfonation with sodium hydroxide solution on heating, and again polycondensation of the dichlorides with the resulting polysulfides. The product has a Karrer elasticity of 0.33 and a total sulfur content of 72 %. Coatings of T-50-based varnish dry at 18 - 20°C. The following forms were developed by the VNIIST: (1) Elastic latex base consisting of two layers, with Portland cement as a filler to be trowelled on, and 2 - 5 layers latex without filler. The first layer trowelled on can be reinforced with a glass fiber

Card 1/2

New Thiokol lattices and ...

up to 0.1 mm thick. This base is impermeable to petroleum products free from aromatic hydrocarbons. For the storage of light-colored petroleum products containing aromatic hydrocarbons, the base has to be coated with several layers of oil-resistant enamel. (2) Coatings of aqueous T-50 Thiokol dispersion for which four-layered enamel coatings are used. The latter consist of copolymers of vinylidene chloride with vinyl chloride and a crylonitrile (BX9-4023 (VKhE-4023), OXC-7 (OKhS-7) enamels, etc.). Reinforcement with glass fabric improves the adhesion of such coatings on concrete, their tensile strength and their resistance to oil. This method was field-tested with 8 gasoline containers. Finally, the importance of this method is emphasized and the industrial production of T-50 is recommended.

Card 2/2

USSR/Chemistry - Corrosion

FD-3365

Card 1/1 Pub. 50 - 9/20

Authors : Sinayskiy, G. M., Smirnov, N. P., Raspopova, L. V., Vestel', G. M., Krist'yan, M. A.

Title : The protection of heat exchangers from corrosion caused by water

Periodical : Khim. prom. No 7, 419-423, Oct-Nov 1955

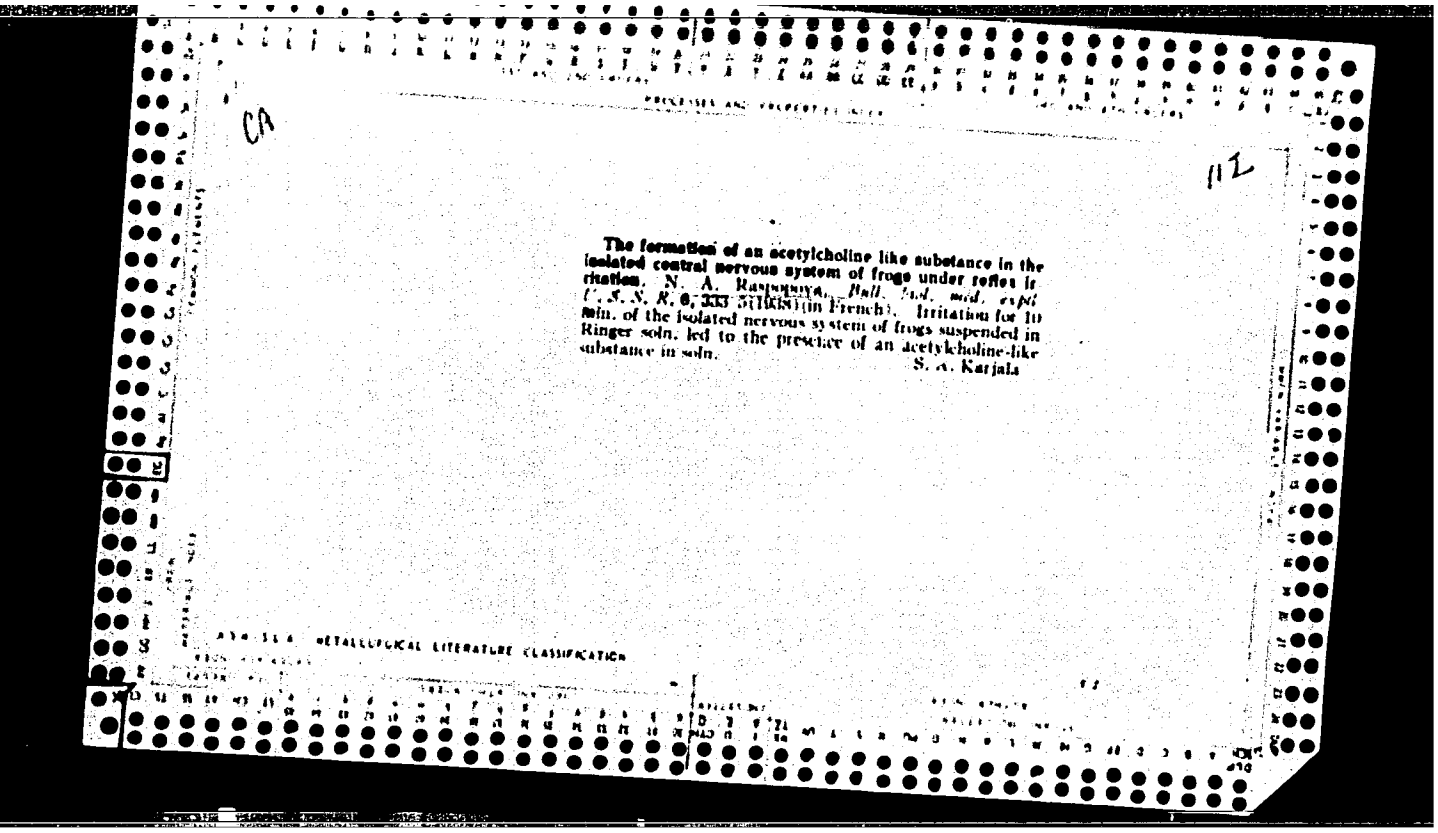
Abstract : Found that coating of heat exchanger tubes with bakelite reduced corrosion considerably and improved the heat transfer coefficient as compared with that of unprotected tubes that had corroded. Twelve references, all USSR, 4 since 1940. Two figures, 1 graph, 4 tables.

Institution : --

Submitted : --

SINAYSKIY, G.M.; SMIRNOV, N.P.; RASPOPOVA, L.V.; VESTEL', G.M.; KRIST'YAN, M.A.

Protection of heat exchangers from corrosion by water. Khim.prom. no.7:419-423 O-N '55. (MLRA 9:3)
(Heat exchangers--Corrosion)



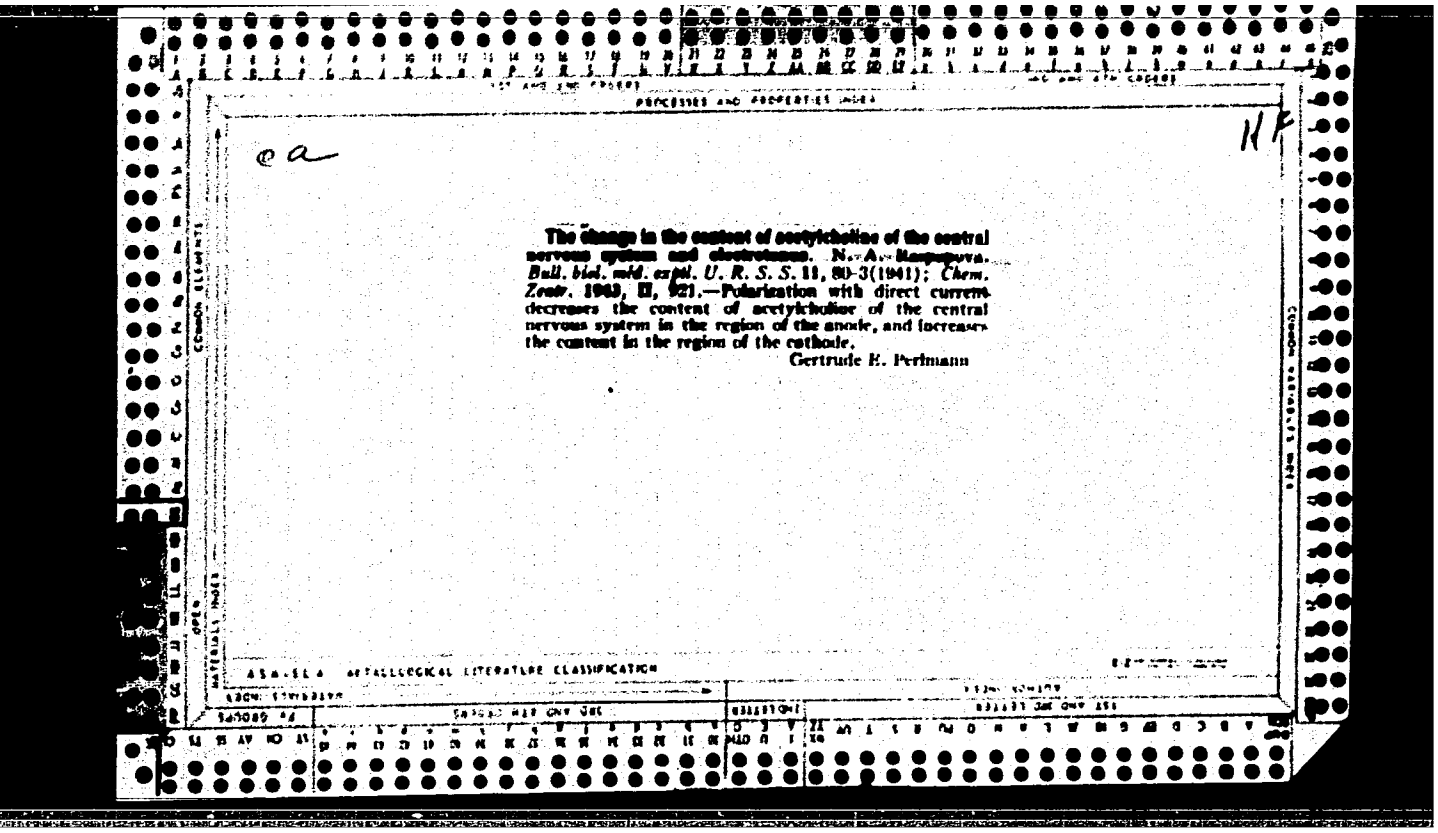
CA

112

The formation of an acetylcholine like substance in the isolated central nervous system of frogs under reflex irritation. N. A. Rasumova. *Bull. Soc. méd. exptl. U. S. S. R.* 6, 333-5(1938)(in French). Irritation for 10 min. of the isolated nervous system of frogs suspended in Ringer soln. led to the presence of an acetylcholine-like substance in soln.

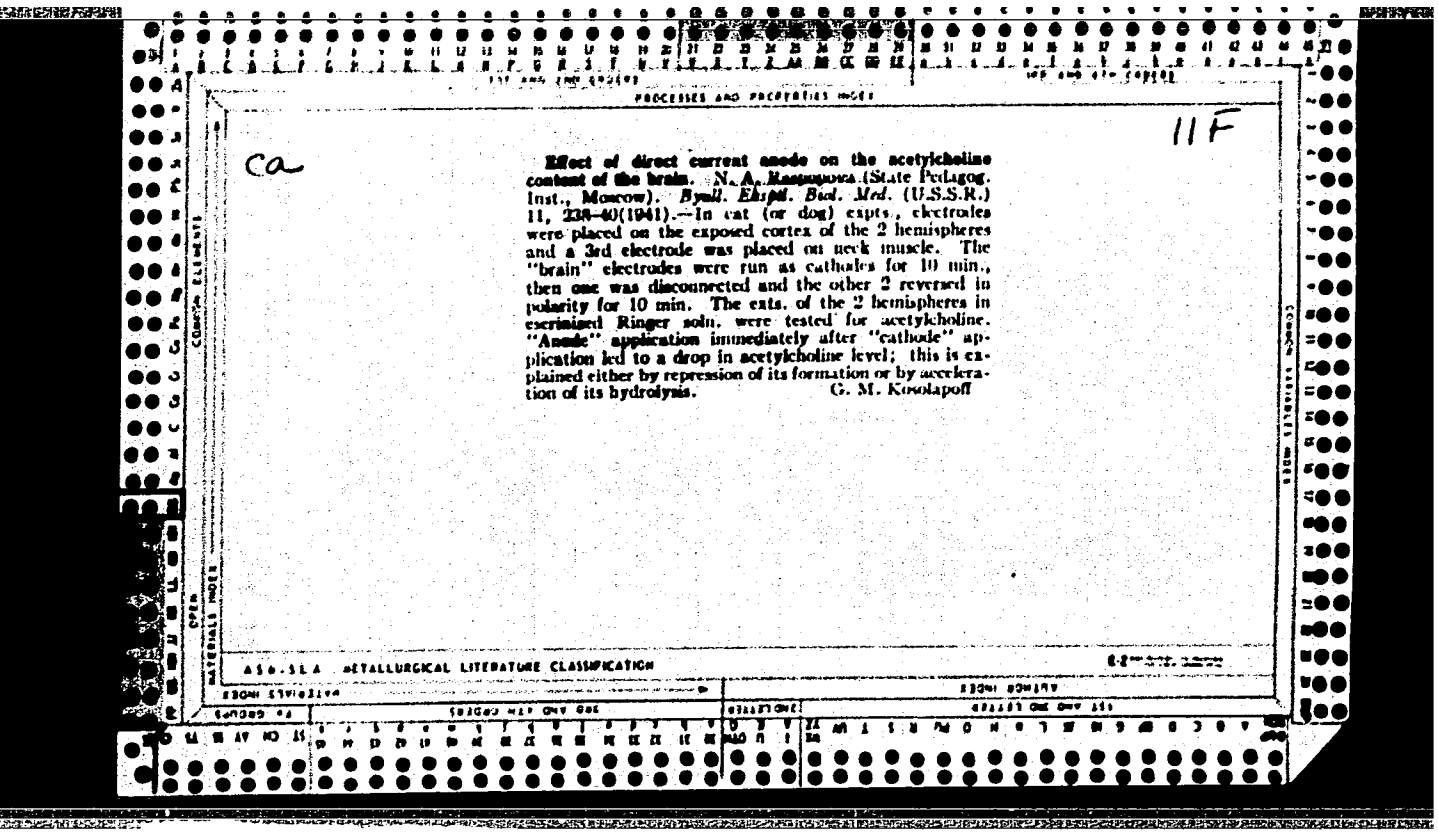
S. A. Karjala

METALLURGICAL LITERATURE CLASSIFICATION



The change in the content of acetylcholine of the central nervous system and electrotonus. N. A. Mangasarova. *Bull. biol. méd. exptl. U. R. S. S.* 11, 80-3(1941); *Chem. Zentr.* 1943, II, 921.—Polarization with direct current decreases the content of acetylcholine of the central nervous system in the region of the anode, and increases the content in the region of the cathode.

Gertrude E. Perlmann



PROCESSES AND PROPERTIES INDEX

11F

Ca

Effect of direct current anode on the acetylcholine content of the brain. N. A. Rastopova (State Pedagog. Inst., Moscow). *Byull. Eksptl. Biol. Med.* (U.S.S.R.) 11, 238–40(1941).—In cat (or dog) expts., electrodes were placed on the exposed cortex of the 2 hemispheres and a 3rd electrode was placed on neck muscle. The "brain" electrodes were run as cathodes for 10 min., then one was disconnected and the other 2 reversed in polarity for 10 min. The exts. of the 2 hemispheres in eserinized Ringer soln. were tested for acetylcholine. "Anode" application immediately after "cathode" application led to a drop in acetylcholine level; this is explained either by repression of its formation or by acceleration of its hydrolysis. G. M. Kosolapoff

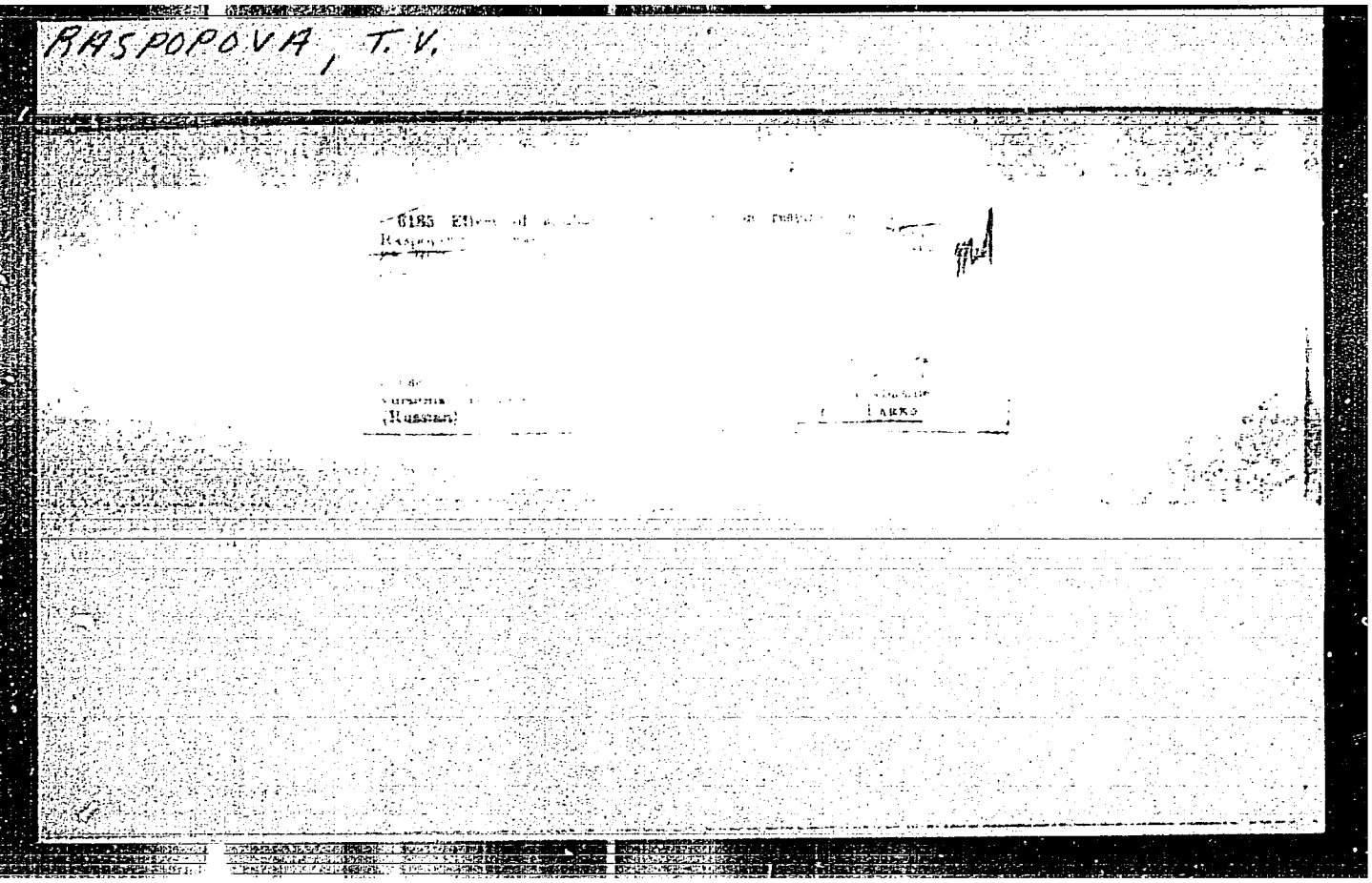
ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

RASPOPOVA, T.V.

2

8530. Influence of alcohol on respiration on a background of the action of morphine, urethane, and barbiturates. T. V. Raspopova and I. V. Zaikonnikova *Farmakol i Toksikol.* 1955, 18, 27–29. *Referat Zh. Biol.* 1956, Abstr No 79263. The effects of ethyl alcohol (I) were studied on rabbits and cats with reference to respiration, on a background of the action of a series of preps. Respiration was recorded with a tracheal cannula. I was administered i.v. in a ratio of 1 : 5 in doses of 1·5—5 ml/kg, at different rates (2 ml in the first sec. and 2 ml in 20 sec.). Administration of I on the background of the effect of morphine (on the rabbit) stimulated respiration with an increase in the ventilation vol. of the lungs. The greatest effect was shown by rapid administration of large doses of I. On the background of urethane anaesthesia, administration of I led to decreased ventilation vol. of the lungs in cats with rapid administration of large doses. Administration of I under conditions of hexanol and pentanol anaesthesia did not alter the character of the respiration. (Russian) F. McKechnie

Chair Pharmacology, Kazan State Med. Inst.



RASPOPOVA, T. V.

Effects of alcohol on respiration after giving morphine, urethan, or barbiturates. T. V. Raspopova and I. V. Zaikonnikova (State Med. Inst., Kazan). *Farmakol. i Toksikol.* 18, No. 6, 27-9(1955).—When EtOH (20% soln., 1.5 ml./kg.) was given to rabbits after morphine (30 mg./kg. subcutaneously) respiration was stimulated and effective pulmonary vol. increased. The effect was greater with rapid than with slow administration of the EtOH. When given after urethan, EtOH depressed respiration and decreased effective pulmonary vol.; after hexenal or Na pentothal it caused no change in respiration. Julian F. Smith

MD

0

L 25324-65 EWG(j)/EWT(m)/EPF(c)/EPR/EWP(j)/EWP(t)/EWP(b) Pc-4/Pr-4/Ps-4
IJP(c)/RPL JD/WW/JFW/RM

ACCESSION NR: AP5002727 S/0195/64/005/006/0981/0988

AUTHORS: Denisov, Ye. T.; Kharitonov, V. V.; Raspopova, Ye. N.

TITLE: Formation of free radicals by interaction of hydrogen peroxide with cyclohexanone

SOURCE: Kinetika i kataliz, v. 5, no. 6, 1964, 981-988

TOPIC TAGS: hydrogen peroxide, free radical, oxidation reduction reaction, initiator concentration, equilibrium constant

ABSTRACT: The role of cyclohexanone was studied in the formation of free radicals by cyclohexanol oxidation. It is shown that cyclohexanone unites with hydrogen peroxide in an oxidizing reaction to form a peroxide which is quickly reduced into free radicals. This is accomplished by means of α-naphthylamine inhibitors. First, the rate of free radical formation from the tertiary-butyl peroxide as an initiator was determined at various temperatures, and subsequently it was shown that the rate of amine consumption v_a, and consequentially $\beta = W_i/v_a$, varies as the cyclohexanol-cyclohexanone (c-c) mixture changes. The interaction of the amine with hydrogen peroxide was studied next, in both oxygen and in argon atmospheres.

Card 1/3

L 25324-65

ACCESSION NR: AP5002727

The amine oxidation was determined by the reaction

$$ArNH_2 + H_2O_2 \rightarrow Ar\overset{+}{N}H_3 + {}^{-}OH + \dot{O}H.$$

The rate of amine consumption 5×10^{-4} mol/liter was determined from the rate equations

$$v_0 = \frac{W_i}{\beta} + k[H_2O][\text{In H}]$$

$$W_i = \beta(v_0 - k[H_2O_2][\text{In H}]).$$

The results show that as the cyclohexanone content is increased k_i increases and reaches a constant value. In addition, v_0 was measured in a c-c mixture in the presence of 0.1 M H_2O_2 in argon. It was found that hydrogen peroxide combines with cyclohexanone 1 mol/l mol in a reversible reaction with equilibrium constant $K = 2.2 \times 10^{-5} \exp(6700/RT)$ liter/mol. The reduction rate constant of this peroxide (to a free radical) is given by $k_3 = 2.2 \cdot 10^4 e^{-16000/RT}$ cek^{-1}.

Orig. art. has: 7 tables, 9 equations, and 2 figures.

Card 2/3

L 25324-65

ACCESSION NR: AP5002727

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 15Dec62 ENCL: 00 SUB CODE: GC

NO REF SOV: 003 OTHER: 001

Card 3/3

RASPOPOVA, T. V.

"A Comparative Investigation of Two Digitalis Infuses Prepared in Different Ways," Farmakol. i Toksikol., 2, No. 4, 1939. Mbr., Chair Pharmacology, Kazan Med. Inst., -1939-.

1ST AND 2ND ORDERS

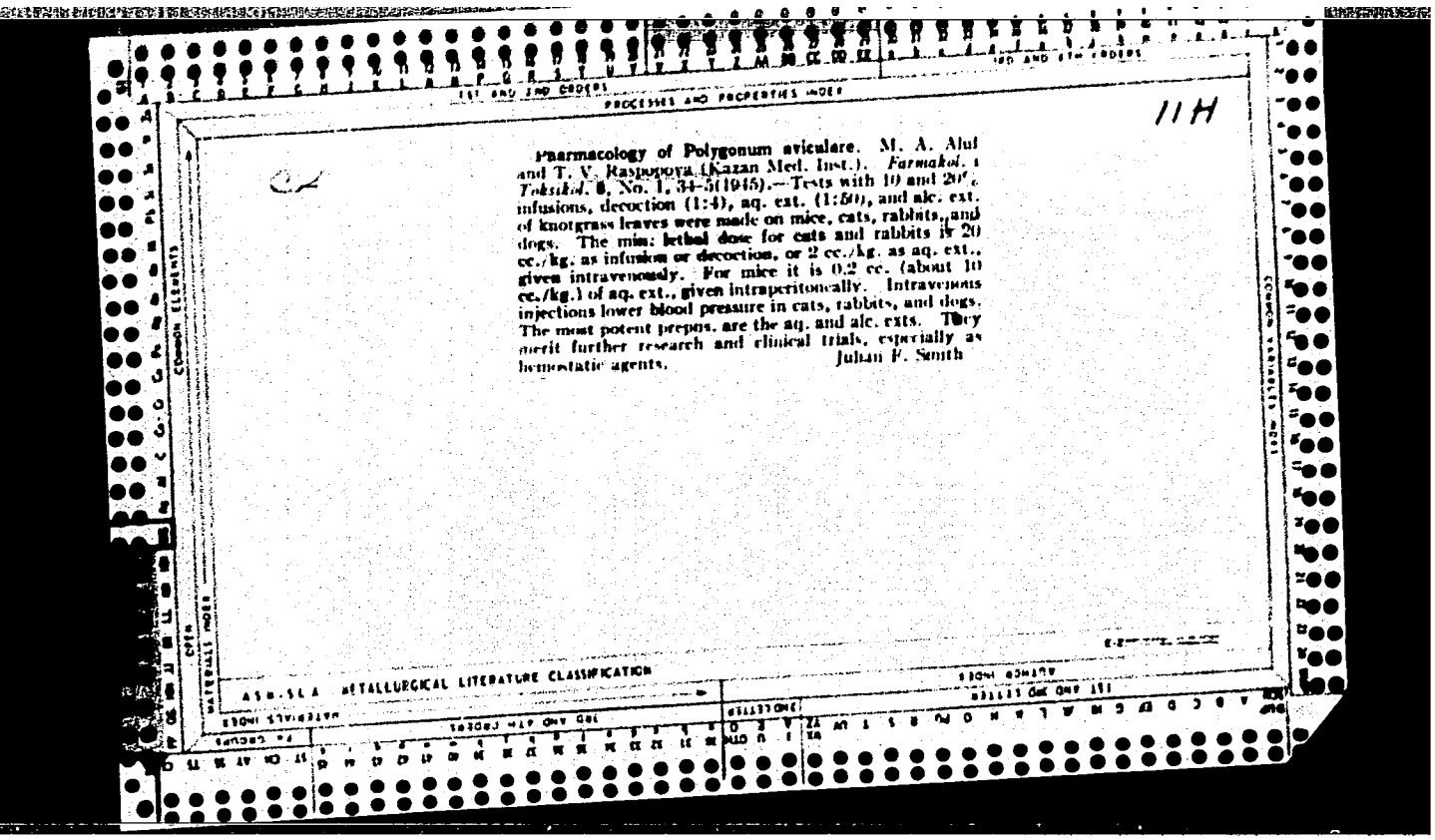
PROCESSES AND PROPERTIES INDEX

11H

Ciperin, a new respiratory stimulant. M. A. Alul and ... Rasquzova (Kazan Med. Inst.). *Farmakol. i Toksikol.* 8, No. 1, 21 (1945). — Ciperin is Et 2-methyl-1-8-(1-methyl-2-pyrrolidyl)imidazo[1,2-a]pyridine-3-carboxylate.2HCl. It stimulates respiration in cats, rabbits, and dogs after intravenous or intramuscular injection. The effect is intensified by morphine or $CCl_3CHO.H_2O$. Rabbits were the most sensitive test animals. Effects of peracetin and ciperin are compared.

Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



11H

Pharmacology of Polygonum aviculare. M. A. Alul and T. V. Raspopova (Kazan Med. Inst.). *Farmakol. i Toksikol.* 8, No. 1, 34-5(1945).—Tests with 10 and 20% infusions, decoction (1:4), aq. ext. (1:50), and alc. ext. of knotgrass leaves were made on mice, cats, rabbits, and dogs. The min. lethal dose for cats and rabbits is 20 cc./kg. as infusion or decoction, or 2 cc./kg. as aq. ext., given intravenously. For mice it is 0.2 cc. (about 10 cc./kg.) of aq. ext., given intraperitoneally. Intravenous injections lower blood pressure in cats, rabbits, and dogs. The most potent preps. are the aq. and alc. exts. They merit further research and clinical trials, especially as hemostatic agents. Julian F. Smith

RASPOPOVA, T.V.

Effect of anabasine derivatives on respiration. Farm.i toks. 18 no.1:37-38 Ja-F '55. (MLRA 8:7)

1. Kafedra farmakologii (zav. dotsent M.A.Aluf) Kazanskogo gosudarstvennogo meditsinskogo instituta.

(ALKALOIDS, effects,
anabasine deriv., on resp.)
(RESPIRATION, effect of drugs on,
anabasine deriv.)

ZAIKONNIKOVA, I.V.; RASPOPOVA, T.V.

Results of the work of the Pharmacological Department in the study of organophosphorus compounds. Nauch. trudy Kaz. gos. med. inst. 14:175-176 '64. (MIRA 18:9)

1. Kafedra farmakologii (zav. - dotsent T.V.Raspopova) Kazanskogo meditsinskogo instituta.

RASPOPOVA, T.V., dotsent

Action of aminazine in combination with analeptics and morphine in an experiment. Kaz.med.zhur. no.3:24-27 My-Je '62. (MIRA 15:9)

1. Kafedra farmakologii (zav. - dotsent T.V.Raspopova) Kazanskogo meditsinskogo instituta.
(CHLORPROMAZINE) (ANALEPTICS) (MORPHINE)

RASPOPOVA, T.V.

Effect of the action of analeptics on respiration against the background of morphine, medinal and urethane application. Farm. toks. 24 no.3:276-279 My-Je '61. (MIRA 15:1)

1. Kafedra farmakologii (zav. - dotsent T.V.Raspopova) Kazanskogo gosudarstvennogo meditsinskogo instituta.
(RESPIRATION) (MORPHINE) (URETHANES)
(ANALEPTICS--PHYSIOLOGICAL EFFECT) (BARBITAL)

DENISOV, Ye.T.; KHARITONOV, V.V.; RASPOPOVA, Ye.N.

Formation of free radicals in the reaction of hydrogen peroxide with cyclohexanone. Kin.i kat. 5 no.6:981-988 N-D '64. (MIRA 18:3)

1. Institut khimicheskoy fiziki AN SSSR.

63413

17.4410 also 2308
17.4312
5.3812

S/191/60/000/006/005/015
B004/B054

AUTHORS: Moiseyev, V. D., Neyman, M. B., Raspopova, Ye. N.

TITLE: On the Origin of Pyrolysis Products of Phenol Formaldehyde Resin

PERIODICAL: Plasticheskiye massy, 1960, No. 6, pp. 11 - 13

TEXT: The authors discuss the possibility of formation of graphitic structures by pyrolysis of polymers containing aromatic rings, which may lead to the production of substances resistant to high temperatures. To clarify this problem they synthesized a phenol formaldehyde resin with C^{14}-tagged formaldehyde (Refs. 9-12), the structure of which is specified:

$$-C_6H_5(OH)-C^{14}H_2-\underset{\displaystyle C^{14}H_2}{\underset{|}{C_6H_5(OH)}}-C^{14}H_2-C_6H_5(OH)-$$

$$-C_6H_5(OH)-C^{14}H_2-C_6H_5(OH)-C^{14}H_2-C_6H_5(OH)-$$

Thermal destruction of the resin occurred at 550 - 800°C and 10^{-2} torr.

Card 1/2

On the Origin of Pyrolysis Products of Phenol Formaldehyde Resin

S/191/60/000/006/005/015
B004/B054

After three hours' duration of the experiment, no gas was formed any longer. The composition of the resulting gases was analyzed chromatographically, the gas components were separated chromatographically by means of activated coal, burned, the resulting CO_2 was absorbed in barium hydroxide solution, and the activity was measured by the end window counter of a B-2 (B-2) apparatus. The coke formed was burned in an oxygen flow, and the CO_2 was also tested for its activity. Table 1 shows the specific activity of gases and coke. Table 2 indicates the activities of the resin and its pyrolysis products. Hence it follows that in the thermal destruction of the resin the greater part of the methylene bridges remains in the coke, and is not removed in the form of gas. The carbonaceous gases do not only develop from the methylene bridges but also by the rupture of part of the aromatic rings. There are 2 tables and 14 references: 7 Soviet, 1 US, 2 British, and 4 Japanese.

[Annotation: This may be an indication of work connected with nosecone research, vanes and valves, and ablation.]

Card 2/2

JANKOVIC, Mirjana; RASPOPOVIC, Milutin

Importance of Gammaridae in the feeding of rainbow trouts.
Arh biol nauka 12 no.3/4:99-116 '60.

1. Stanica za unapredenje ribarstva NRS, Beograd.

JANKOVIC, Drago; RASPOPOVIC, Milutin

The Ohrid trout (Salmo letnica typicus K.) under the changed conditions in the barrage Vlasina Lake. Arh biol nauka 12 no.3/4:117-122 '60.

1. Bioloski institut, Beograd.

RASPORKIN, Fedor Pavlovich; TSYPKINA, F.L., red.; POPOV, N.D., tekhn. red.

[Shoots]Vskhody. Sovetskaia Rossiia, 1962. 78 p. (MIRA 15:9)

(Musatov, Nikolai Pavlovich)
(Rostov Province--Agriculture)

RASPORKIN, F.P.

[Rural trade-union work]Profsoiuznaia rabota na sele. Moskva, Profizdat, 1960. 197 p. (MIRA 15:10)
(Trade unions) (State farms)

ARRIGONI, I.M.; MINKIN, R.B.; RASPUTIN, A.M.; SOLOV'YEVA, Ye.A.; TARTAKOVSKIY, M.B.

New method for a clinical evaluation of the electrocardiogram (frequency analysis of waves of the ventricular complex). Trudy LSGNI 48:408-433 '59. (MIRA 14:2)
(ELECTROCARDIOGRAPHY)

ARRIGONI, I.M.; MINKIN, R.B.; RASPUTIN, A.M.; SOLOV'YEVA Ye.A.; TARTAKOVSKII, M.B.

Clinical significance of the frequency analysis of the ventricular complex of the electrocardiogram. Trudy LSGNI 48:434-446 '59. (MIRA 14:2)

(ELECTROCARDIOGRAPHY)

YERMOLAYEV, A.N.; SHCHERBATENKO, V.V.; RASPUT'KO, I.N.

[Effect of dynamic loads on bread quality] Vliianie dinamicheskikh nagruzok na kachestvo khleba. Moskva, TSentr. in-t nauchno-tekhn. informatsii pishchevoi promyshl., 1964. 45 p. (MIRA 18:5)

BUKHAL[illegible], [illegible]; RASPUTNIS, A.I., inzh.

[illegible] of duct-vaned diffusers of centrifugal compressors. (MIRA 18:10)
Energomashinostroenie 11 no.8:1-5 Ag '65.

L 3641-66 EWT(d)/EPA/EWT(1)/EWT(m)/EWP(w)/EWP(f)/EPF(n)-2/EWP(v)/T-2/EWP(k)/EWA(h)/
ACCESSION NR: AP5025139 ETC(m) WW/EM UR/0143/65/000/009/0038/0046
621.438

62
59
8

AUTHOR: Rasputnis, A. I. (Engineer); Bukharin, N. N. (Engineer)

TITLE: Investigation of gas turbine exhaust nozzles 14

SOURCE: IVUZ. Energetika, no. 9, 1965, 38-46

TOPIC TAGS: gas turbine, exhaust nozzle, hydraulic resistance, turbine design, nozzle design, engine exhaust system

ABSTRACT: The flow of air through nozzles was investigated experimentally to establish their optimum contour and thus reduce the size, weight, and hydraulic losses of the nozzles. The influence of the nozzle contour on turbine efficiency was also evaluated. The following conclusions were reached: 1) Hydraulic losses in exhaust nozzles have a definite influence on gas-turbine efficiency. A decrease of the hydraulic resistance coefficient in the nozzle from 1.83 to 0.90 resulted in a 4—5% increase in turbine efficiency. 2) The reduction in hydraulic losses in the exhaust nozzle is best used to increase the efficiency and the effective shaft work while maintaining constant

Card 1/2

L 3641-66

ACCESSION NR: AP5025139

3

inlet gas parameters. 3) The use of special dividers in a section of the radial-annular bend of the nozzle produces a considerable decrease in the hydraulic resistance coefficient of the nozzle. 4) The minimum hydraulic resistance coefficient (0.56) was obtained in an axial exhaust nozzle which was bent along its axis. Orig. art. has: 7 figures and 11 formulas. [AC]

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M. I. Kalinina (Leningrad Polytechnical Institute)

SUBMITTED: 07May64 ENCL: 00 SUB CODE: PR, ME

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4116

Card 2/2

RASPUTNYY, V.N.

A complex cathode follower. Izv. vys. ucheb. zav.; radiotekh. 6 no.5:495-501 S-O '63. (MIRA 17:1)

1. Rekomendovana kafedroy elektroniki Moskovskogo inzhenerno-fizicheskogo instituta.

35700
S/142/62/005/002/003/019
E192/E382

9.2580

AUTHOR: Rasputnyy, V.N.

TITLE: Transistor regenerative pulse-generators with delayed feedback

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 5, no. 2, 170 - 178

TEXT: The system considered (Fig. 1) consists of a non-linear element which is described by:

$$U_2(t) = f[U_1(t)] \qquad (1),$$

a linear element whose transient response is $h(t)$ and for which:

$$U_3(t) = \int_0^t w(t - \xi)U_2(\xi)d\xi \qquad (2),$$

where $w(t)$ is its impulse response such that $w(t) = dh(t)/dt$, a delay circuit which is described by:

Card 1/4

$$U_4(t) = U_3(t - t_3) \qquad (3)$$

where t_3 is the delay time, and an automatic gain control element. An arbitrary voltage $U_o(t)$ is applied to the input of the system from an external source. The response of the system is described by:

$$U_1(t) - \beta \int_0^{t-t_3} w(t - t_3 - \xi) f\left[U_1(\xi)\right] d\xi = U_o(t) \qquad (4),$$

which determines the character of the signal at the input of the nonlinear element. It is assumed that the nonlinear element is described by the function:

$$U_2(t) = A\, U_1^{\gamma}(t) \qquad (5)$$

Card 2/4

where γ is a coefficient characterizing the nonlinearity and
A is a constant.
The signal $U_1(t)$ is assumed to be in the form of a portion of a cosinusoid. This signal can easily be expressed in operatorial form. It is applied to the nonlinear element and then to the linear circuit, where the resulting output signal $U_3(p)$ again appears at the input. Thus, from the stability conditions for the pulse circulation in the system it follows that $U_2(p) = U_3(p)$ (the signals being expressed in operatorial form). It is possible to determine the response $K(p)$ of the linear circuit. A formula for $K(p)$ is derived and from its analysis it is found that if the system is linear ($\gamma = 1$), the circulation of a pulse in the system cannot occur. The problem of pulse circulation was investigated experimentally in two regenerative transistor generators and it was found that the duration of the pulses and their repetition frequency were independent of the supply voltage and the increase in the

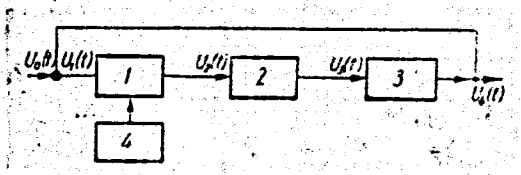
Transistor regenerative ....

ambient temperature. On the other hand, the pulse amplitude was very strongly dependent on the supply voltage. The transistor regenerative pulse-generators with delayed feedback can be used successfully for the generation of very short stable pulses, repeated at very high frequencies, in spite of their inherent shortcomings. There are 7 figures.

ASSOCIATION: Kafedra elektroniki Moskovskogo inzhenerno-fizicheskogo instituta (Department of Electronics of Moscow Engineering-physics Institute)

SUBMITTED: September 23, 1961

Fig. 1:



RASPUTNYY, V.N.

Transistor regenerative pulse generators with delayed feedback. Izv. vys. ucheb. zav.; radiotekh. 5 no.2:170-178 Mr-Ap '62. (MIRA 15:7)

1. Rekomendovana kafedroy elektroniki Moskovskogo inzhenerno-fizicheskogo instituta.
(Oscillators, Transistor)

24.2120,24.6000,24.7400

77331
SOV/57-30-1-10/18

AUTHORS: Fogel', Ya. M., Slabospitskiy, R. P., Rasrepin, A. B.

TITLE: Charged Particle Emission From Metal Surfaces During Positive Ion Bombardment

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, Nr 1, pp 63-73 (USSR)

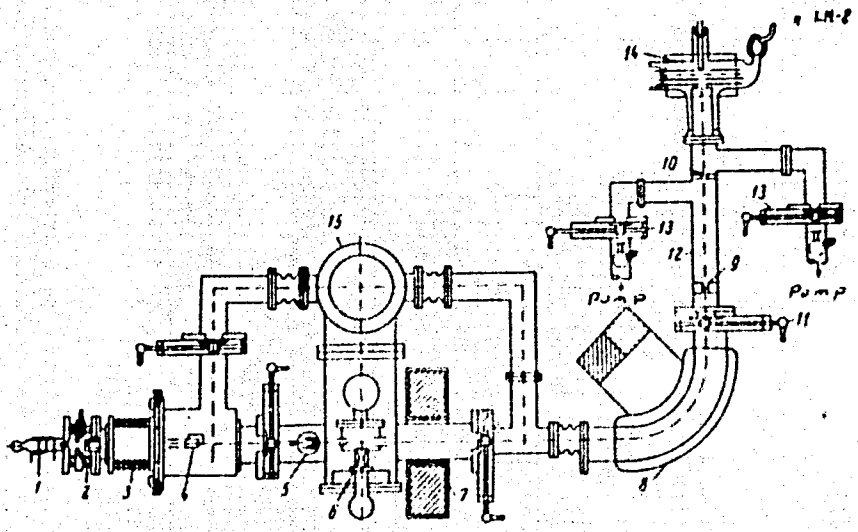
ABSTRACT: Introduction: In previous work of this kind researchers were able to measure only the sum of the K^- coefficient of secondary negative ion emission and R, the coefficient of reflection of incoming ions. In the 10 kev incoming proton energy region one cannot give any reasonable meaning to K^- due to a steep rise in R. To date there are no data about K^+, the coefficient of secondary positive ion emission, in scientific literature. In the present investigation the authors measured K^- and K^+ coefficients for Mo bombarded by

Card 1/17

H^+, He^+, Ne^+, Ar^+, Kr^+, and O^+, and for Ta, W, Cu, and Fe bombarded by H^+, Ne^+, and Ar^+. Incoming ion energy varied between 10 and 40 kev. The method also allowed the measurements of the coefficient γ of the secondary electron emission, and of R.. The authors report these values in this paper, too. Description of the experimental set-up: Figure 2 represents the diagram of the experimental set-up. The ion gun consists of a high-frequency ion source 1, a symmetrical three-electrode lens 2, and an accelerating tube 3. Two crossed plate condensers 4, adjust the direction of the beam, and the Faraday cage 5, measures the ion yield of the gun. Next, the ions go through the mercury vapor target 6, used to generate negative hydrogen ions by a method described by Fogel' and others (ZhTF, XXVI, 1208, 1956). Negative hydrogen ions are used to compare the coeffipients of secondary ion emission due to positive and negative ions of the same material. The magnetic lens 7, supplies an additional focusing while the mass-monochromator 8,

Charged Particle Emission From Metal Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18



Card 3/17

Fig. 2.

supplies monoenergetic ions of unique mass. Channels 9 and 10 (2 × 4 × 20, and 2 × 4 × 9 mm, respectively) at a mutual distance of 370 mm, constitute the collimator 12, leading to the measuring chamber 14, represented on Fig. 3.

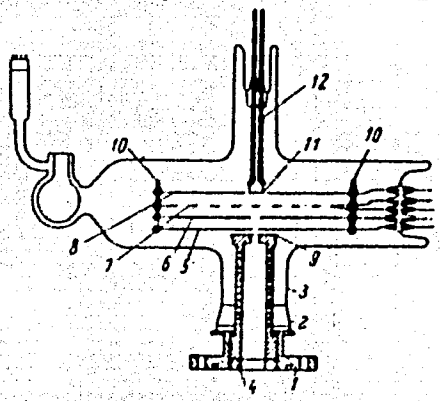


Fig. 3.

The glass container 3, houses the screen 5, preventing the scattered incoming ions from reaching the collector 6, the grid 7, the target screen 8, and the target 11. The glass is soldered to a fernico ring 2, which is soldered further to the metallic flange 1, connected to the collimator. All electrodes, except the target, are mounted on two quartz plates 10, representing a frame fixed inside the container walls. Target consists of a metal strip 0.1 mm thick, mounted on two molybdenum leads 5 mm in diameter. A magnetic screen 4, of iron shields the incoming ion beam. Transparency of the grid equals 97%. Target with screen, grid, collector, and screen are separated 10 mm from one another. The chamber is inside a magnetic field of approximately 500 Oersteds, parallel to the planes of the electrodes. The whole assembly is evacuated by means of the MM-1000 diffusion pump 15, while additional pumping of the collimator and measuring chamber is done by means of two MM-40 diffusion pumps. During the measurements the pressure in the chamber was kept

at 2 to 3 · 10^{-7} mm Hg. Incoming beam current was usually of the order of 10^{-9} amp. Currents of the secondary and reflected ions on the collector were measured using a string electrometer with a sensitivity of 6.7 · 10^{-12} amp/div. Methods of measurements: Consider the relation between the collector current I_c and the potential difference $V_{t.g.}$ between the target and the grid for a constant potential $V_{g.c.}$ between the grid and collector, accelerating positive ions from the grid toward the collector. For some value of $V_{t.g.}$ the collector collects all secondary and reflected primary ions. If $E^-_{o\ max} < e(V_{g.c.} + V_{t.c.})$, where $E^-_{o\ max}$ is the maximum initial energy of the secondary ions, they cannot reach the collector, and, therefore, $I'_c = I^+_{sec} + I^+_{refl}$. Changing the sign of $V_{t.g.}$ one slows the secondary ions down, and accelerates the negative ions. Reflected ions always reach

the collector since the primary beam has 10 kev or more of energy. In a like manner, changing electrode potentials the authors define $I_c'' = I^+_{refl}$; $I_c'' = I^-_{sec} - I^+_{refl}$. The curve $I_c = f(V_{t.g.})$ at constant $V_{g.c.}$ must have three plateau regions as seen in Fig. 1.

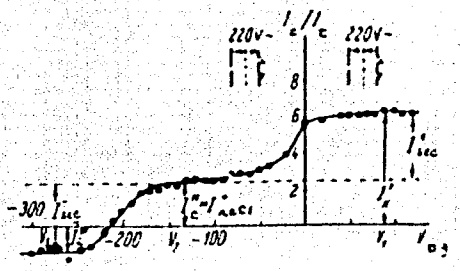


Fig. 1.

Card 7/17

The coefficients are then given by

$$K^- = \frac{I_c'' + I_c'''}{I_t + I_c'' - I_c'''}, \qquad (1)$$

$$K^+ = \frac{I_t - I_c'}{I_c + I_c'}, \qquad (2)$$

$$R = \frac{I_c''}{I_t + I_c''}. \qquad (3)$$

where I_t denotes the target current. Similarly, the authors obtain the coefficient γ, taking into account the effects of the magnetic field. This field is in general used to prevent secondary electrons from reaching the collector. Results of measurements: Targets are always prepared in the same

Charged Particle Emission From Metal Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

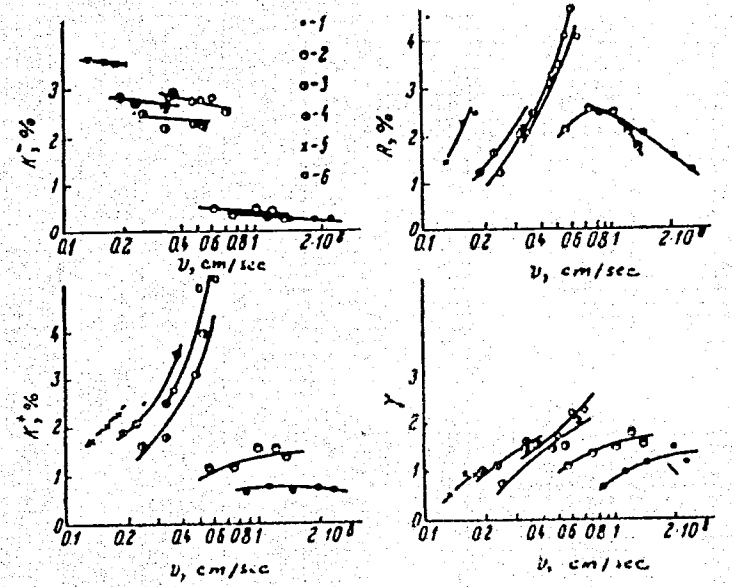


Fig. 4. (1) H^+; (2) He^+; (3) Ne^+; (4) Ar^+; (5) Kr^+; (6) O^+.

Card 10/17

variation has been observed already by Zandberg (ZhTF, XXV, 1386, 1955) and Dukel'ckiy (ZhTF, 19, 731, 1949). To investigate the influence of adsorbed gases the authors kept a M_o target at 1800° C for 20 minutes and measured the values of coefficients as function of time. Results are on Fig. 5

The beam consisted of 12 kev Ar^+ ions. The authors explain the curves by assuming that the removal of the adsorbed gas by baking reduces to zero the emission of secondary ions. Since, according to Hagstrum (see references) it takes only a few seconds at 10^{-7} mm Hg to build a monomolecular layer on an outgased sample, and it took some 20 minutes to bring the K^- and K^+ coefficients to their original values, the authors concluded that many layers of adsorbed gas must be responsible for the secondary emission. The γ coefficient behavior is in agreement with results of Waters (see references)

and Brunnee (Zs. f. Phys., 147, 161, 1957). The authors investigated the influence of the target temperatures on the coefficients. Although they found regular temperature variations due probably to different thickness of adsorbed gas layers, the process did not lead to the same values during the heating and then cooling-back, and the authors have no explanation for these effects. Hydrogen, at approximately 10^{-4} mm Hg was also brought in contact with the target at 1500° C, to investigate the influence of the nature of adsorbed gas on the coefficients. Figure 7 shows distinct changes in their values. The target metals had considerable influence on the coefficients, as seen on Fig. 8. The authors will perform a more detailed evaluation of the present data after performing the next stage of planned experiments which include the investigation of the composition of the secondary ionic emission by means of a mass spectrometer, the determination of their energy spectrum, and the

Charged Particle Emission From Metal Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

influence of the outgasing process and target temperature on each type of ions, separately. Professor A. K. Val'ter showed interest in this work. There are 8 figures; and 17 references, 8 Soviet, 1 German, 4 U.K., 4 U.S. The most recent U.K. and U.S. references are: R. C. Bradley, J. Appl. Phys., 30, 1 (1959); P. M. Waters, Phys. Rev., 111, 1053 (1958); R. E. Honig, J. Appl. Phys., 29, 549 (1958); H. D. Hangstrum, Rev. Sci. Insr., 24, 1122 (1953); F. L. Arnot, C. Becket, Proc. Roy. Soc., A168, 103 (1938).

ASSOCIATION: Khar'kov State University imeni A. M. Gor'kiy (Khar'kovskiy gosudarstvennyy universitet imeni A. M. Gor'kogo)

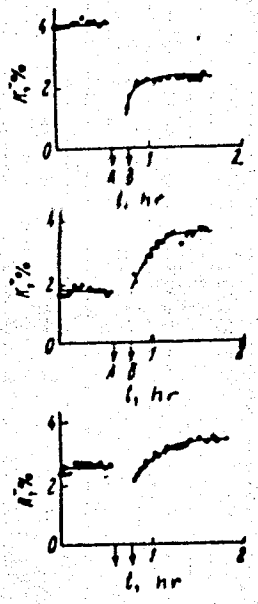
SUBMITTED: June 15, 1959

Card 15/17

Charged Particle Emission From Metal Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

Fig. 7. (A) Start of t the target heating; (B) end of the target heating.



Card 16/17

Charged Particle Emission From Metal Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

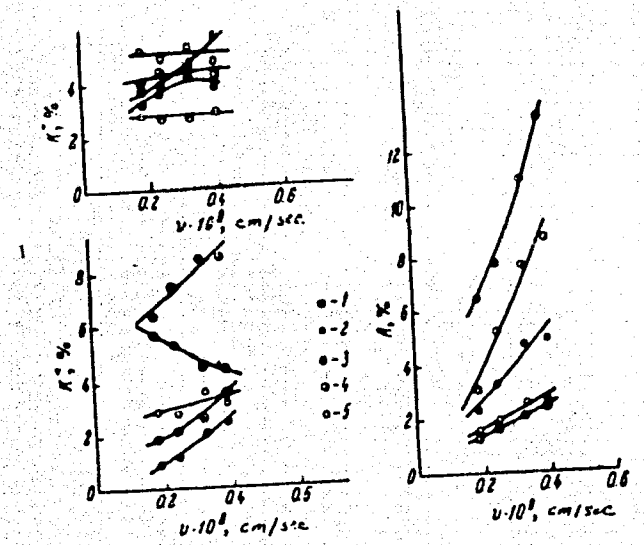


Fig. 8. Ions Ar^+.
(1) Mo; (2) Fe;
(3) Ta; (4) W;
(5) Cu.

Card 17/17

SHOLOKHOVA, A.B.; FREYDIN, A.S.; GURMAN, I.M.; RASS, F.V.

Use of synthetic resins for binding asbestos cement. Adhesives based on epoxide resins. Plast.massy no.9:17-21 '60.
(MIRA 13:11)

(Asbestos cement) (Adhesives) (Epoxy resins)

SLAVUTSKIY, L., inzh.; KARMILOV, S., inzh.; RASS, F., inzh.

Using plastics in making wall panels. Zhil. stroi. no.11:13-16 N '60. (MIRA 13:11)

(Plastics) (Walls)

15.1124

S/191/60/000/009/004/010
B013/B055

AUTHORS: Sholokhova, A. B., Freydin, A. S., Gurman, I. M., Rass, F.M.

TITLE: Use of Synthetic Resins for Bonding Asbestos Cement. Adhesives Based on Epoxy Resins

PERIODICAL: Plasticheskiye massy, 1960, No. 9, pp. 17 - 21

TEXT: The present publication treats the development of epoxy-resin base adhesives for asbestos cement. The working methods applied have been described previously. The experiments were mainly carried out using ЭД-6 (ED-6) and ЭД-5 (ED-5) epoxy resins. The epoxy resins of types ЭДФ-1 (EDF-1) and ЭДФ-3 (EDF-3) were used in some tests. The tests showed that in spite of the strength and stability of the adhesive joints (Table 1), adhesives based on ED-6 and ED-5 with polyethylene amine as hardener are not recommendable, since the high initial viscosity of these adhesives renders them uneconomic in use. In all subsequent tests therefore, the residue from hexamethylene diamine distillation was used as hardener. The following additives were tested with a view to improving certain characteristics: styrene, dibutyl phthalate, МГФ-9 (MGF-9) and

Card 1/3

ТГМ-3 (TGM-3) polyester and Kukersol' varnish (Table 2). From the technical and economic standpoint cement proved the most suitable filler. Compounds with MGF-9 and TGM-3 polyester acrylate resins (corresponding to ЭПЦ-1 (EPTs-1) and ЭПЦ-2 (EPTs-2)) were found to be the best adhesives for industrial purposes. The most characteristic properties of an adhesive (under otherwise constant conditions) are increasing bond strength (Table 3) and bonding property (Table 4). Since these factors are dependent on the temperature of the medium, tests were carried out at 18 - 20°C and 30 - 35°C. It may be seen from Table 3 that a sufficient bond strength is attained at 30°C after pressing for 6 h and at 18°C after pressing for 8 h. Maximum bond strength, however, is reached only after 24 h. Table 4 shows that the adhesive retains its bonding property for 2 - 3 h after being applied to the surface. The required bond strength was attained in as little as 1.5 h by accelerating the bonding process by moderate heating (60-100°C) (Table 5). The strength of adhesive joints was tested by natural and accelerated aging (Figs.2 and 3) which caused destruction of material but not of adhesive joints. Similar results were obtained in tests of weather resistance (Fig.4a) and resistance to water (Fig.4b). The positive results obtained with small samples were confirmed

Use of Synthetic Resins for Bonding Asbestos Cement. Adhesives Based on Epoxy Resins

S/191/60/000/009/004/010
B013/B055

at bonding of large panels. These tests were carried out under the supervision of L. M. Koval'chuk and V. V. Paturoyev. At present, bonding of asbestos-cement panels is being tested on an experimental building in Lyubertsy. M. N. Plungyanskaya is mentioned. There are 5 figures, 5 tables, and 1 Soviet reference.

Card 3/3

GUBENKO, A.B., doktor tekhn.nauk; KARMILOV, S.S., inzh.; PASS, F.V., inzh.; CHAPSKIY, K.A., inzh.

Glued three-layer slabs made with plastic. Trudy TSNIISK no.11:64-224 '62. (MIRA 15:9)

(Plastics)
(Laminated materials)

RASS, F.V.

Glued panels made from plastic material and asbestos cement.
Prom. stroi. 40 no.3:28-32 '62. (MIRA 15:3)
(Walls)

S/191/63/000/002/011/019
B101/B186

AUTHORS: Gubenko, A. B., Koval'kuk, L. M., Paturoyev, V. V., Rass, F. V.

TITLE: Reinforcing of asbestos cement by glass-reinforced polyester plastics

PERIODICAL: Plasticheskiye massy, no. 2, 1963, 37-41

TEXT: Based on Western experience, three-layered asbestos-cement (AC) boards are intended for the cladding of buildings in the Soviet Union. These fiber-glass filled laminated plastic panels are to be used as ceiling and floor panels, partition walls etc. Attempts were made to eliminate the brittleness and hygroscopicity of AC. Spraying with perchlorovinyl compositions or polyethylene proved inefficient. Experiments were made with glass-reinforced plastics. Cut glass rove and glass canvas were used as glassy fillers, and ПН-1 (PN-1), ПН-3 (PN-3), or ПН-4 (PN-4) polyester maleinate resins as binders with addition of an accelerator, an initiator, and mineral dyes, and filled with 75 parts by weight of quartz sand or 50 pbw of kaolin. More than 75% parts by weight of filler

Card 1/3

Reinforcing of asbestos ...

inhibited the glass canvas impregnation. AC coatings were applied either by spraying the short-cut glass rove and the polyester resin with curing agent on the board (obtaining a uniform coat only with 1.5-2.0 mm thickness), or by gluing the glass canvas onto AC where the thickness could be reduced to 0.5 mm. Results: For uncovered AC: impact strength (i.s., $kg \cdot cm/cm^2$), 2-2.5; bending strength (b.s., kg/cm^2), 200; tensile strength (t.s., kg/cm^2), 100; for AC coated with BB (VV) glass canvas, layer thickness 0.8-0.9 mm, the data were (calculated per mm layer): i.s. 7.5; b.s. 330; t.s. 176; using XCK-1 (KhZhK-1) glass canvas, thickness 1.4-1.5 mm, per mm layer: i.s. 6.0; b.s. 435; t.s. 300; for AC sprayed with glass-reinforced plastic, thickness 2.5-3.0 mm, per mm layer: i.s. 5.0; b.s. 265; t.s. 150. Water absorption within 10 days fell from 40 mg/cm^2 for uncoated AC to 10 mg/cm^2 for coated one; water permeability fell from about 200 $mm^3/cm^2/cm$ to about 2 $mm^3/cm^2/cm$. Accelerated aging in 30 cycles, each consisting of 18 hrs moistening by 16-18°C water, freezing at -20 ± 5°C, 15 hrs thawing at +16 to +18°C, and 7 hrs drying at +80°C gave a satisfactory shear stress of about 15 kg/cm^2. Spraying with glass-reinforced plastic gave satisfactory heat insulation. AC coated with glass-reinforced plastic is fireproof and cheaper than glass-

Card 2/3

S/191/63/000/002/011/019
B101/B186

Reinforcing of asbestos ...

reinforced plastics. A process flow scheme included a bench for cutting AC, a roller conveyer for gluing the boards, a unit for spraying the glass-reinforced plastic, and a polymerization chamber. There are 8 figures and 1 table.

Card 3/3

FREYDIN, A.S., kand.tekhn.nauk; SHOLOKHOVA, A.B., inzh.; RASS, F.V., inzh.

Synthetic glue for gluing asbestos cement and concrete together and with plastics and other materials. Trudy TSNIISK no.24:114-145 '63. (MIRA 17:1)

SHAPIRO, I.M.; ROTT, N.N.; RASS, I.T.

Radiation damage of the nucleus as a factor causing the inhibition of cell division. Zhur. ob. biol. 21 no.4:289-296 Jl-Ag '60. (MIRA 13:7)

1. Institute of Animal Morphology, U.S.S.R. Academy of Sciences and Helminthological Laboratory, U.S.S.R. Academy of Sciences.
(RADIATION—PHYSIOLOGICAL EFFECT)
(CELL DIVISION (BIOLOGY))

87419

17.2400
21.6300

S/020/60/135/006/037/037
B016/B060

AUTHORS: Neyfakh, A. A. and Rass, I. T.

TITLE: Radiational Determination of the Morphogenetic Activity of Nuclei in the Embryonal Development of Ascaris suum

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 6, pp. 1557-1560

TEXT: The authors report on their study of the morphogenetic function of the nucleus based on the action of strong doses (up to 300 kr, intensity 5000 r/min) of an ionizing radiation, which, however, do not injure the cytoplasm to an appreciable extent. The functioning time of nuclei in different stages of development can be determined on the strength of their inactivation by such doses (Ref. 1). The test objects were eggs of Ascaris suum incubated at 27°C. The level of development of the asynchronous culture was determined by calculating the percentual content of different stages of development: unsegmented egg, 2, 3-4, 8, and 16 blastomeres, early and late morula, blastula, early and late gastrula, larva (Table 1). The eggs (200 of them) were irradiated by an X-ray apparatus РУП -1 (RUP-1).

Card 1/4

87419

Radiational Determination of the Morphogenetic Activity of Nuclei in the Embryonal Development of Ascaris suum

S/020/60/135/006/037/037
B016/B060

Table 2 shows the distribution of culture according to the above enumerated stages on irradiation with 150 kr at 0 to 10 days from the beginning of incubation. From a comparison of these data with normal development (Table 1) it is possible to express the stage at which development has stopped in days of development of the nonradiated control series. It is inferred from results that within the range of doses 50-100 to 200-300 kr the irradiation effect is not dependent upon the dose, but on the time of incubation until the moment of irradiation. After the action of 100 and 150 kr the cytoplasm goes on developing only by virtue of the previous activity of the nucleus. Table 1 and 2 as well as Fig. 3 give the results. It is observed from Fig. 3 that irradiation during the first 2.5 days of egg development causes this development to be interrupted at about a level of 4.2 days in control eggs. With an irradiation at later stages the development sets in the later the later the time of irradiation. It is therefore believed that nuclei do not exert their morphogenetic function prior to the 2-3 blastomere stage, but that this is not started until later. In Misgurnus fossilis which has mosaic-like eggs, nuclei begin with their function much earlier than Ascaris suum. It is further observed

Card 2/4

Radiational Determination of the Morphogenetic Activity of Nuclei in the Embryonal Development of Ascaris suum

S/020/60/135/006/037/037
B016/B060

from Table 2 that the development of Ascaris eggs irradiated prior to the 2-blastomere stage comes about at various stages (from 2 to 16 blastomeres). It is inferred therefrom that the first four segmentations are not directly controled by the nucleus, but that they are dependent upon the cytoplasm whose properties have been shaped already during ovogenesis with the participation of the nucleus. The further development of the eggs, as from the stage of early morula, proceeds under the control of the nucleus. Unlike the regulation type of development, the formation of morula and blastula in mosaic-like eggs constitutes no passive continuation of already started segmentation, but an independent phase of development, namely the beginning of differentiation, in which the new distribution of differentiated cells follows a definite plan (Ref. 2). The morphogenetic function of nuclei is necessary for this process to take place.
There are 3 figures, 2 tables, and 2 Soviet references.

Card 3/4

87419

Radiational Determination of the Morphogenetic Activity of Nuclei in the Embryonal Development of Ascaris suum

S/020/60/135/006/037/037
B016/B060

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Animal Morphology imeni A. N. Severtsov of the Academy of Sciences USSR). Gel'mintologicheskaya laboratoriya Akademii nauk SSSR (Helminthological Laboratory of the Academy of Sciences USSR)

PRESENTED: June 21, 1960, by K. I. Skryabin, Academician

SUBMITTED: June 18, 1960

Card 4/4

L 7775-66 EWT(m)

ACC NR: AP5025925 SOURCE CODE: UR/0205/65/005/005/0713/0719

AUTHOR: Rass, I. T.; Tarasenko, A. G.

38
B

ORG: None

TITLE: Antiradiation effectiveness of cystamin and its deposition in thymus cells of mice in vivo and in vitro

SOURCE: Radiobiologiya, v. 5, no. 5, 1965, 713-719

TOPIC TAGS: experiment animal, antiradiation drug, 19 drug effect, cell physiology, irradiation effect, tracer study

ABSTRACT: In in vivo experiments on albino mice weighing 14 to 16 g cystamin was administered subcutaneously in 3 and 15 mg doses 15 min before irradiation (RUP-1 unit, 200 kv, 15 ma, 0.5 mm Cu + 0.75 mm Al filters, 40 to 300 r/min) with 200 to 2000 r doses. Animals were killed immediately and 6 hrs later. Thymus cell suspensions were prepared for incubation and then centrifuged to determine the number of cells with pyknotic nuclei. In in vitro experiments thymus cells were suspended in Tyrode's solution containing cystamin (0.1, 0.25, and 0.5 mg/ml concentrations) before irradiation with 200 to 4000 r doses. Following irradiation, thymus cell suspensions were incubated and centrifuged to determine the number of cells with pyknotic nuclei. In additional

Card 1/2 UDC: 628.58

L 7775-66

ACC NR: AP5025925

experiments cystamin was administered following irradiation. Also, tracer studies were conducted using cystamin-S35 to determine the amount of cystamin deposited in thymus cells. Findings show that in in vivo experiments cystamin administered before irradiation displays very slight radioprotective action and is completely ineffective with postradiation administration. In experiments in vitro cystamin reduces radiation damage of thymus cells when administered in 0.1 to 0.5 mg/ml concentrations before as well as after irradiation, with the reduction of radiation damage dependent on cystamin concentration. Amounts of cystamin deposited in thymus cells in vivo and in vitro depend on the cystamin dose and on incubation temperature in vitro. With in vivo administration of a 15 mg dose 8 times as much cystamin is deposited in thymus cells as in vitro with an initial concentration of 0.1 mg/ml. Amounts of cystamin deposited in irradiated and nonirradiated thymus cells were found to be the same. Thus, the absence of cystamin radioprotective action in vivo and its effectiveness in vitro cannot be explained by quantitative differences of cystamin in thymus cells. The radioprotective action of cystamin in experiments in vitro appears to be related to its capacity for depressing glycolytic processes in isolated tissues. Orig. art. has: 6 tables.

SUB CODE: 06/ SUBM DATE: 07Dec64/ ORIG REF: 011/ OTH REF: 020

Card 2/2

L 44137-65 EWG(j)/EWT(m)

ACCESSION NR: AP5010842 UR/0020/65/161/004/0959/0961

AUTHOR: Rass, I. T.

TITLE: Radiosensitivity and nature of radiation injury to mouse thymus cells in situ

SOURCE: AN SSSR. Doklady, v. 161, no. 4, 1965, 959-961

TOPIC TAGS: thymus gland, radiosensitivity, mitosis, radiation injury

ABSTRACT: After whole-body irradiation of mice with doses of 200-2000 r, the number of thymus cells with pycnotic nuclei 6 hours after exposure ranged from 50 to 70% of the total. Similarly, irradiation of a suspension of thymocytes with about the same doses killed only 50-60% of the cells. The author has assumed that the destruction of an equal number of cells by either whole-body irradiation of the animals or irradiation in vitro with a wide range of doses might be caused by the existence of two kinds of cells differing in radiosensitivity. To determine whether the difference was due to the existence of two kinds of cells or to different stages in the life cycle of a homogeneous cell population, the author irradiated mice with a dose lethal to half the cells and then re-irradiated the animals 1-2

Card 1/2

L 44137-65
ACCESSION NR: AP5010842

days later with the same dose. Destruction of new cells after the second exposure would indicate that the given stage of the life cycle was more radioresistant, whereas lack of reaction would suggest that there are two kinds of cells with different radiosensitivity. The results showed that the second exposure did not lead to the destruction of more cells, implying that all the cells were killed by the first exposure. Hence, the thymus gland has at least two kinds of cells that differ sharply from each other in degree of radiosensitivity. Orig. art. has: 2 figures, 2 tables.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsov, Akademiya nauk SSSR (Institute of Animal Morphology, Academy of Sciences SSSR)

SUBMITTED: 24Nov64 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 009

BSB

Card 2/2